



Roan Plateau

Including former Naval Oil Shale Reserves No. 1 and 3

DRAFT Resource Management Plan Amendment (RMPA) and
Environmental Impact Statement (EIS)

Alternatives

- Five DRAFT alternatives
- EIS analyzes impacts of each of the alternatives
- Alternative III is the agency-preferred alternative
- Final RMP amendment developed with public input on the DRAFT plan
- Planning area includes 53,405 acres of private surface and private mineral (no BLM jurisdiction)

The BLM has prepared five alternatives as part of the Roan Plateau DRAFT Resource Management Plan Amendment (RMPA) and Environmental Impact Statement (EIS). These alternatives provide a range of management scenarios ranging from “No Action,” which would continue existing management practices, to varying levels of allowable surface disturbance.

The alternatives described and analyzed in this document represent five possible management scenarios. Input was received from BLM staff, other resource or land management agencies, local governments, individual citizens, BLM’s Northwest Colorado Resource Advisory Council (RAC), environmental groups, industry, and other interested parties.

These alternatives are not “set in stone.” The alternatives may be refined as part of this RMPA/EIS process. The final RMPA may include components from all of the alternatives.

- **Alternative I:** a large portion of the Planning Area would remain unavailable for further oil and gas leasing and development during the anticipated 20-year life of this RMPA. Management actions and restrictions on surface use described in the 1999 Final Supplemental EIS (FSEIS) would continue to be applied. These include:
 - More than 22,000 acres with NGD (no ground disturbance) and/or SSR (site-specific relocation) restrictions that would be applied to avoid, minimize, or mitigate impacts to sensitive resources.
 - A 5-month seasonal restriction (timing limitation [TL] stipulation) limits activity in areas of deer and elk winter range.
 - Cross-country motorized or mechanized travel is permitted throughout the Planning Area under this alternative.
- **Alternative II** analyzes management for a full array of multiple-use activities, including mineral leasing, for all lands except 21,382 acres identified as having wilderness character. These areas would be managed to protect and maintain roadless characteristics,

- Preferred alternative would defer mineral leasing and development above the cliffs until 80 percent of projected wells are drilled below the cliffs.
- The preferred alternative was developed in cooperation with Rifle, Parachute, Garfield and Rio Blanco Counties, and the State of Colorado.
- Roan Plateau Planning Area includes 127,007 acres of public and private.
- 157 miles of motorized routes currently on top of plateau.

naturalness, and opportunities for solitude or primitive and unconfined recreation.

Other resource protection goals would be accomplished through special management prescriptions associated with the designation of four Areas of Critical Environmental Concern (ACECs). Streams eligible for a suitability study under the Wild and Scenic Rivers Act (WSRA) will be managed to protect those values pending the results of the study.

Alternative II analyzes more than 59,000 acres with no leasing, NGD, and/or SSR restrictions, as well as the 5-month TL for deer and elk winter range.

Motorized or mechanized travel, including over-snow travel by snowmobile, would be restricted to designated routes throughout the Planning Area. Hubbard Mesa would be designated a Special Recreation Management Area for off-highway vehicle (OHV) use on designated routes.

- **Alternative III, BLM's Preferred Alternative**, analyzes management for a full array of multiple-use activities, including mineral leasing, while maintaining key ecological, visual, and recreational values. This alternative, developed in cooperation with Rifle, Parachute, Garfield and Rio Blanco counties, and the State of Colorado, specifically address local concerns about the impacts of rapid development of the natural gas industry.

Alternative III would defer leasing and drilling for oil and gas in nearly 35,000 acres above the rim until 80 percent of anticipated wells below the rim have been completed. The exact time to reach the 80-percent threshold cannot be predicted with certainty because it depends on a number of technical, geological, and economic factors.

The two drainage-based ACECs in Alternative II (Trapper/Northwater Creek and East Fork Parachute Creek) would also be designated in Alternative III, primarily encompassing the floors of the major drainages.

The entire Parachute Creek watershed atop the plateau, with a total area of more than 29,000 acres, would be combined into a Parachute Creek Watershed Management Area (WMA).

Alternative III would protect roadless areas and naturalness on a total of 9,100 acres (Map 39) through no ground disturbance (NGD) restrictions for other resource values. NGD areas within the 9,100 acres would not be subject to modification, waiver, or exceptions.

Protection of river segments found eligible under the Parachute Creek WSRA would continue pending a suitability study. Resource protection goals would be achieved by applying NGD and/or SSR restrictions to more than 60,000 acres, as well as the 5-month TL for deer and elk winter range.

Motorized or mechanized travel would be limited to designated routes, including the Hubbard Mesa SRMA but excluding snowmobile travel.

- **Alternative IV** analyzes management for a full array of multiple-use activities, including mineral leasing, while maintaining key ecological, visual, and recreational values. Alternative IV would designate ACECs for the two principal watersheds on top of the plateau (Trapper/Northwater and East Fork Parachute Creeks), and the former would also be designated as a WMA.

No areas would be managed specifically for maintenance of wilderness characteristics. Protection of river segments found eligible under the WSRA would be maintained pending the results of a suitability study. Resource protection goals would be achieved by identifying more than 58,000 acres subject to NGD and/or SSR restrictions. Impacts in deer and elk winter range would be mitigated with a 2-month TL applied in the permitting process as a condition of approval instead of a lease stipulation.

Motorized or mechanized travel would be limited to designated routes, excluding over-snow travel by snowmobile, throughout most of the Planning Area. However, the Hubbard Mesa SRMA would be designated as open to cross-country OHV travel.

- **Alternative V** analyzes management for a full array of multiple-use activities, emphasizing mineral development and motorized public access while protecting all special status species and limiting development on slopes steeper than 50 percent. This alternative would identify more than 43,000 acres subject to NGD and/or SSR restrictions.

Except for over-snow travel by snowmobile, Alternative V would limit motorized or mechanized travel to designated routes throughout the Planning Area. This restriction would apply to the Hubbard Mesa OHV area, although it would not be designated an SRMA.

Useful charts and graphs, contained in the DRAFT RMP/EIS, are included below.

Table ES-1. Limitations and Resource/Management Designations Used in Impact Analysis

Limitation/Designation		Alternative				
		I	II	III	IV	V
Areas with Surface Stipulations or Other Restrictions, Limitations, or Special Requirements ¹						
No Lease for Oil and Gas ¹		44,267 ac	21,382 ac	0	0	0
Deferred Lease for Oil and Gas ²		0	0	34,758 ac	0	0
No Ground Disturbance, No Surface Occupancy (NGD/NSO)		13,912 ac	31,200 ac	30,928 ac	30,928 ac	21,609 ac
Site-Specific Relocation, Controlled Surface Use (SSR/CSU)		8,256 ac	7,015 ac	29,594 ac	27,486 ac	21,517 ac
Timing Limitation (TL) for Deer Winter Range ³		24,978 ac (5-months)	24,978 ac (5-months)	24,978 ac (5-months)	24,978 ac (2-months)	0 ac
Timing Limitations (TLs) for Raptor, Shorebird, and Waterfowl Nesting ³		3,692 ac	3,692 ac	3,692 ac	3,692 ac	3,692 ac
Standard Restrictions, Limitations, and Oil and Gas Stipulations		7,167 ac	14,006 ac	13,080 ac	15,188 ac	30,746 ac
Areas with Protective Designations or Management Actions ¹						
Designated Areas of Critical Environmental Concern		0	36,184 ac	11,529 ac	11,529 ac	0
Areas Managed to Protect Roadlessness and Naturalness ⁴		0	21,382 ac	9,100 ac	0	0
Streams Managed to Preserve Wild & Scenic River Eligibility		0	7,883 ac	7,883 ac	7,883 ac	0
Watershed Management Areas		0	0	29,073 ac	14,219 ac	0
Motorized or Mechanized Travel	Open	66,934 ac	0	0	2,460 ac	0
	Designated Routes Only ⁵	0	45,552 ac	66,934 ac	64,474 ac	66,934 ac
	Closed	0	21,382 ac	0	0	0
Visual Resource Management	VRM Class I	0	37,240 ac	925 ac	925 ac	0
	VRM Class II	24,039 ac	13,428 ac	48,752 ac	48,752 ac	0
	VRM Class III	37,115 ac	14,607 ac	15,563 ac	15,563 ac	63,022 ac
	VRM Class IV	10,340 ac	8,350 ac	8,350 ac	8,350 ac	10,568 ac
	VRM Class V	2,096 ac	0	0	0	0
Upland Vegetation – Condition Rating Objective		40%	70%	50%	50%	40%
Riparian and Wetland Vegetation – Level of Protection		Existing	Enhanced	Enhanced	Enhanced	Existing
Deer and Elk Seclusion Areas		Maintain	Preserve and Enhance	Mitigate	Mitigate	None
Colorado River Cutthroat Trout Habitat		Maintain	Enhance	Enhance	Enhance	Maintain
¹ Includes overlap between stipulations and protective designations on which they are based. See text for definitions of NGD, NSO, SSR, CSU, TL, and COA. TLs include overlap with other stipulations, including no-lease area for oil and gas under Alternative I. ² For deferred leasing atop the plateau, the threshold criterion of completing 80% of anticipated wells below the rim as a trigger for development atop the plateau would be met in 10 to 20+ years (estimated at 16 years for this RMPA/EIS). ³ Winter range TL applied as a lease stipulation under Alternatives I through III and a Condition of Approval under Alternatives IV; raptor TL also includes bald eagle winter roosts. ⁴ For Alternative II, the areas would be managed to protect roadlessness, naturalness, and solitude or primitive and unconfined recreation (i.e., wilderness character). For Alternative III, the areas would be managed in ways that would protect roadlessness and naturalness, and the associated NGD/NSO restrictions would allow no exceptions. ⁵ Over-snow travel by snowmobile limited to designated routes under Alternative II.						

Table ES-2. Anticipated Oil and Gas Development on BLM Lands During 20-Year Period

Component	Alternative				
	I	II	III	IV	V
Area Available for Pads, Other Surface Facilities, and Roads ¹	15,423 ac	21,021 ac	42,674 ac	42,674 ac	51,993 ac
Wells (Pads) atop the Plateau ^{2,3}	10 (7)	87 (66)	51 (39)	168 (126)	234 (175)
Wells (Pads) below the Cliffs ³	845 (247)	818 (244)	1,273 (363)	1,156 (323)	1,348 (409)
Total Wells (Pads) ³	855 (254)	905 (310)	1,324 (402)	1,324 (449)	1,582 (584)
Long-term Ground Disturbance for Pads and Associated Facilities ⁴	638 ac	745 ac	944 ac	1,079 ac	1,373 ac
Length and Area of New or Widened Access Roads ⁴	152 miles (513 ac)	186 miles (603 ac)	241 miles (817 ac)	270 miles (861 ac)	350 miles (1,112 ac)
Total Long-term Ground Disturbance	1,151 ac	1,346 ac	1,761 ac	1,940 ac	2,495 ac
Total Gas Produced by New Wells on BLM Lands ⁵	983 BCF	1,041 BCF	1,523 BCF	1,523 BCF	1,819 BCF

¹ Leasable area minus areas with NSO stipulations.

² For Alternative III, leasing and drilling atop the plateau would be deferred until 80% of the total wells anticipated below the rim under Alternative III have been effectively completed to total depth and a production test performed.

³ Based on 40-acre surface spacing, except 20-acre surface spacing for directional drilling below cliffs. Downhole spacing as follows: Mesaverde: above the rim: 40 acres; below the rim: 80% at 10 acres, 20% at 20 acres; Wasatch: 160 acres.

⁴ Pad impacts as follows: 1.9 acres for single-well pads, 2.5 acres for multi-well pads. Road impacts as follows: 0.6 mile of new or widened road per pad; above the rim: 80% new roads 30 feet wide, 20% existing roads widened by 20 feet; below the rim: 20% new roads 30 feet wide, 80% existing roads widened by 20 feet.

⁵ Natural gas produced over operational life of wells drilled on BLM lands in Planning Area during 20-year period of analysis. Based on RFD (Appendix H). Assumes 1.17 BCF per Mesaverde well and 0.7 BCF per Wasatch well; weighted average approximately = 1.15 BCF per well. Assumes 2.5 persons per household and 94 MCF per customer per year.

Table ES-3. Overall Level of Potential Adverse Impacts Compared to Existing Conditions ¹

Resource		Alternative				
		I	II	III	IV	V
Anvil Points Cave		Minor	Negligible	Minor	Minor	Minor
Fossils		Minor	Negligible	Negligible	Negligible	Negligible
Soils		Minor	Minor	Minor	Minor	Minor
Groundwater		Negligible	Negligible	Negligible	Negligible	Negligible
Surface Water	Quality	Minor	Minor	Minor	Minor	Moderate
	Quantity	Negligible	Negligible	Negligible	Negligible	Negligible
Air Quality	Hazardous Air Pollutants, Priority Pollutants, Visibility	Minor	Minor	Minor	Minor	Minor
	Sulfur and Nitrogen Deposition, Acid Neutralizing Capacity	Negligible	Negligible	Negligible	Negligible	Negligible
Vegetation ²		Minor	Negligible	Minor to Moderate	Moderate	Moderate
Fish and Wildlife ²		Minor	Minor	Minor to Moderate	Moderate	Major
Special Status Species ²		Minor	Minor	Minor to Moderate	Moderate	Major
Visual Quality ²		Minor	Minor	Moderate	Moderate	Major
Cultural Resources		Minor	Minor	Minor	Minor	Moderate
Recreation and Travel ²		Minor	Minor	Minor to Moderate	Moderate	Major
Livestock Grazing ²		Minor	Minor	Minor to Moderate	Moderate	Moderate

¹ Limited to impacts on BLM lands during 20-year period of analysis. Overall impact summary compared to current condition; specific impact levels may vary by resource and area. Assumes implementation of specified or legally required mitigation measures. Resource categories are not weighted. Does not consider socioeconomic impacts or management conflicts.

² Range of impact levels reflects estimated 16-year deferral period during which no oil and gas development would occur on top of the plateau under Alternative III.